

Enclosure to Our Letter of May 19, 2004
International Application PCT/EP03/05035-274411

NEW CLAIMS:

1. Brake pad for a disc brake of a vehicle, particularly of a rail vehicle, having a carrier plate (2) to which several friction elements (1), which, when the brake is actuated, can be pressed onto the friction surface of a brake disc, are in each case fastened, the tension springs (6) being supported on the rear side of the carrier plate (2) facing away from the friction elements (1),

characterized in that the carrier plate (2) is partially form-elastically deformable in the overlapping area of the friction elements (1).

2. Brake pad according to the preamble of Claim 1,

characterized in that a spring element (13, 14) is assigned to each friction element (1), which spring element (13, 14) is supported on the one side on the back of the friction element (1) and on the other side on the carrier plate (2), on its side facing the friction element, and forms a radial fixing of the friction element (1).

3. Brake pad according to Claim 1, characterized in that, for the elastic deformability, slots (4,

- 9) or grooves are provided which are made in a defined manner in the carrier plate (2).
- 4. Brake pad according to Claim 1 or 3, each friction element (1) resting in a ball socket (3) of the carrier plate (2),

characterized in that the slots (4) are arranged in a radially extending manner in the ball socket (3).

5. Brake pad according to Claim 1, each friction element resting in a ball socket (3) provided in the carrier plate (2),

characterized in that the ball socket (3) is constructed at least in areas as a cup spring.

- 6. Brake pad according to one of Claims 1 or 3 to 5, characterized in that the thickness of the areas, which are bounded by two slots (4) respectively and form webs, is constant over the radius or differs over the radius.
- 7. Brake pad according to Claim 4, characterized in that the slots provided in the ball socket (3) are arranged parallel to one another.
- 8. Brake pad according to Claim 1, characterized in that partial thickenings, on which the friction elements (1) rest, are provided in the overlapping area of the

friction elements (1).

- 9. Brake pad according to Claim 8, characterized in that the thickenings are constructed as knobs (10).
- 10. Brake pad according to Claim 7, characterized in that the thickness of the carrier plate (2) as a whole is identical or differs in a defined manner.
- 11. Brake pad according to Claim 1, characterized in that, outside the overlapping area of the friction element (1), slots (9), which are arranged in a defined manner, are provided in the carrier plate (2).
- 12. Brake pad according to Claim 2, characterized in that each spring element (13, 14) rests in a receiving device (12) provided in the carrier plate (2).
 - 13. Brake pad according to Claim 2, characterized in that the spring element (13) is constructed as a cup spring.
- 14. Brake pad according to Claim 13, characterized in that the cup spring (13) rests on the friction element (1) by means of its edge bounding the internal bore.

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15. Brake pad according to Claim 12 or 13,

characterized in that the depth of the receiving device (12) is smaller than the height of the unstressed cup spring (13).

16. Brake pad according to Claim 13,

characterized in that the inside diameter of the cup spring (13) corresponds approximately to the largest outside diameter of an attachment of the friction element (1), preferably in the form of a spherical-segment-shaped area (8), a cylindrical or a conical attachment.

17. Brake pad according to Claim 12 or 13,

characterized in that the outside diameter of the receiving device (12) is smaller than the largest base plan dimension of the friction element (1).

18. Brake pad according to Claim 2,

characterized in that the spring element (14) is constructed as a form spring in which the friction element (1) rests radially fixed on the rear side.

19. Brake pad according to Claim 18,

characterized in that the form spring (14) has an indentation (15) in which an attachment of the friction element (1) rests which is adapted thereto.

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20. Brake pad according to Claim 19,

characterized in that the indentation (15) has a spherical-cap-shaped or conical construction.

21. Brake pad according to Claim 19 or 20,

characterized in that the edge area of the form spring (14) bounding the indentation (15) rests on the friction element (1).

22. Brake pad according to Claim 18,

characterized in that the form spring (14) has an axially extending, circumferential collar (16) which projects slightly beyond the carrier plate (2) on the side facing the friction element (1).

23. Brake pad according to Claim 21 or 22,

characterized in that, relative to the base of the receiving device (12), the edge area bounding the indentation (15) is higher than the collar (16).

24. Brake pad according to Claim 11 or 18,

characterized in that the diameter of the receiving device (12) corresponds to the outside diameter of the form spring (14).

25. Brake pad according to Claim 24,

characterized in that the outer base plan dimension of the form spring (14) is smaller than the largest base plan dimension of

the friction element (1).

- 26. Brake pad according to Claim 2, characterized in that the spring elements (13, 14) consist of spring steel sheet.
- 27. Brake pad according to Claim 1 or 2, characterized in that the carrier plate (2) consists of a casting material, particularly a precision casting, preferably a cast steel or cast aluminum.
 - 28. Brake pad according to Claim 1 or 2, characterized in that the carrier plate (2) consists of steel sheet.
- 29. Brake pad according to Claim 1 or 28, characterized in that the carrier plate (2) is constructed as a deep-drawn steel sheet part.